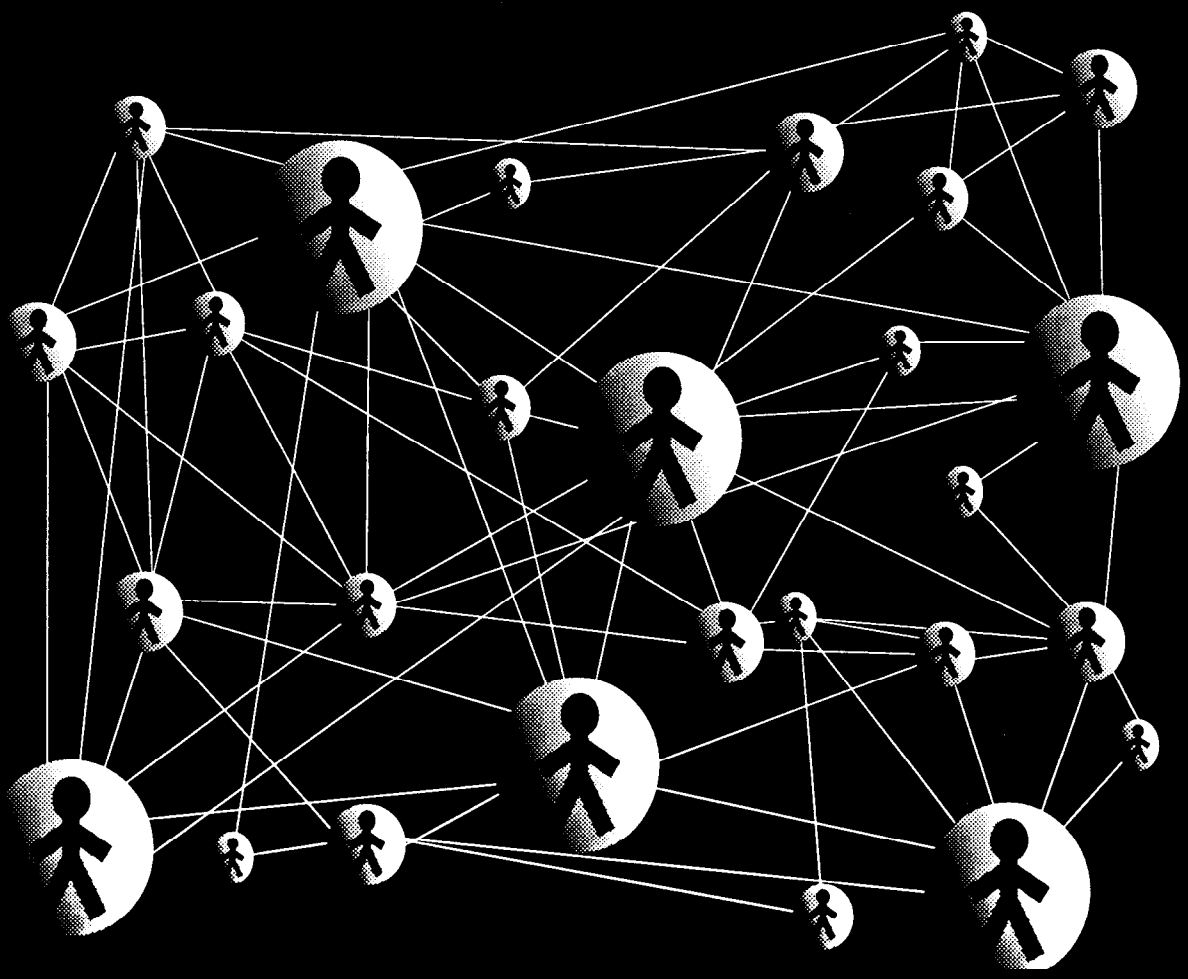
CONNECTING LEARNERS

The South Carolina Educational Technology Plan

A Publication of the South Carolina Department of Education



STATE OF SOUTH CAROLINA
DEPARTMENT OF EDUCATION

Dr. Barbara Stock Nielsen
State Superintendent of Education

October 19, 1998

To the People of South Carolina:

When the South *Carolina Educational Technology Plan* was presented in November 1995, it contained a vision for the technology South Carolina's students would need to access to achieve economic, educational, and personal success. Since then, we have made tremendous progress in meeting these goals. In presenting this enhanced version, we retain the spirit and intent of the original plan. That blueprint for systemwide educational reform laid a foundation for continued growth and renewal.

Connecting Learners: The South Carolina Educational Technology Plan, which we present in two formats, reflects the rapidly changing world of learning and technology. This print version provides recommendations and an overview of the information resources and tools that will enable our students to achieve high academic learning standards. The web-based document is a dynamic resource, providing relevant, up-to-date hyperlinks, thus connecting educators with the most current information available.

Because technology must be applied to our daily lives, it is our responsibility as educators and parents to ensure that each child, as a citizen in the Information Age, has the skills and attitudes necessary to meet the challenges of a rapidly changing world. As evidenced by the South Carolina curriculum frameworks and standards, high ideals for student achievement at both the state and national level drive the goals we set for learning. The emphasis on standards for informational and technology literacy is inherent in this plan.

Students are at the heart of this plan. As adults who will be employed in careers not even envisioned at this time, South Carolina's students have the challenge to use technology in a manner that will make them, and thus the Palmetto State, successful. This is a responsibility shared by each of us -- whether as a parent, educator, or leader in community, industry or business. Forging partnerships that connect our learners with all those who share a stake in South Carolina's future must be the strategy that empowers our students to be future competitors both nationally and internationally.

As always, together we will continue striving to provide the very best education for all South Carolina students.

Sincerely,

Barbara S. Nielsen

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Acknowledgements

The South Carolina Educational Technology *Plan*, released in 1995, was developed by the Educational Technology initiatives Committee and was chaired by Dr. Benny Coxton. Connecting Learners: The South *Carolina Educational Technology Plan* builds on the successes and expands on the vision of the original plan. We acknowledge the work of the educators, businesses, and citizens who created the blueprint that has brought South Carolina to the forefront in providing telecommunications access to all students in our state.

The South Carolina Department of Education gratefully acknowledges the public/private partnership that guides the K-12 Technology Initiative. This partnership includes the South Carolina Department of Education, the Office of Information Resources at the Budget and Control Board, South Carolina Educational Television, and our telecommunications providers - BellSouth and LightStar. In addition, we acknowledge the support of the Governor's Office and members of the State Legislature. We offer special thanks to Jon Beard, Amy Pritchett, and Lloyd Spruill of Productivity Point International, and Bill Thomas, Southern Regional Education Board, for their assistance with technology planning.

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Barbara Stock Nielsen, Ed.D.
South Carolina State Superintendent of Education

A Cause for Celebration — Look How Far We've Come!

The K-12 Technology initiative continues to place South Carolina on the leading edge of deploying technology in classrooms. And there is more cause to celebrate as South Carolina continues to transform student learning through technology. South Carolina has been recognized as one of five states that provides telecommunications connections for 100% of its schools (*Computers and Classrooms: the Status of Technology in* U.S. Schools, Educational Testing Service,1 997).

Telecommunications Infrastructure

- Every K-12 school and public library (almost 1400 sites) has Internet connectivity. Thus, our students have access to resources from the Internet, public libraries, other schools, and the resources of the South Carolina Information Network (SCINET).

- The unique public/private partnership that guides the K-12 Technology Initiative is a model that can be emulated throughout state government and is serving as a model for other states throughout the nation. Partners include the South Carolina Department of Education, the Office of Information Resources at the Budget and Control Board (OIR), South Carolina Educational Television (SCETV), and private sector telecommunications companies - BellSouth and LightStar.

- Over thirty schools in South Carolina are participating in pilot projects using two-way video. These projects are providing resources to students in rural and less affluent areas of the state. Plans for technology for all levels of education include the integration of telecommunications, two-way video, and broadcast technology into a seamless source of information for students and teachers.

- The South Carolina State Library is coordinating DISCUS, South Carolina's Virtual Library, on behalf of public, academic, and school libraries in South Carolina. This project provides access to a wide range of information databases via the Internet.

Professional Development

- Thirteen South Carolina Department of Education Regional Technology Centers, equipped with multi-station, networked computer labs and staffed with technology specialists, provide professional development opportunities and technology support to educators around the state. These classes and workshops focus on a broad range of technologies and resources emphasizing the Internet, video, multimedia, and CD-ROM. Not only is instruction and support provided at the computer labs, these technology specialists also visit schools to conduct on-site professional development workshops, assist with local technology planning, and coordinate training with the Math and Science Hubs.

- Over 21,000 South Carolina educators have participated in professional development opportunities funded by the K-12 Technology initiative. These include a graduate-credit distance education course, recertification courses, workshops, and technical courses for school district technicians.

- South Carolina's universities are providing a portion of the training for teachers with the University of South Carolina offering *Taming the Information Technology Jung/e* for beginning technology users. Clemson University also offers six model school sites where teachers and pre-service teachers can learn how to integrate technology into their classrooms every day.

- A National Science Foundation grant of $9.7 million established an infrastructure of thirteen regional hubs to improve the quality of science and mathematics education. The South Carolina Statewide Systemic Initiative (SSI) has been funded an additional $5.85 million to focus on the effective use of data and professional development using Internet-based technology.

Video Infrastructure

- South Carolina Educational Television (SCETV) has installed a satellite dish and three receivers in every school in the state. The 32-channel satellite system enables students to access a greater variety of instructional programming.

- Twenty-eight distance education learning centers (DELCs) operating across the state offer short distance learning courses for students and teachers. Programs are developed to meet the specific needs of the schools served by each center.

- South Carolina's institutions of higher education serve as models of effective distance education. The South Carolina Technical Education System's interactive video network is used by the sixteen technical colleges and the South Carolina State Board for Technical and Comprehensive Education. Other sites in the state with similar technology are eligible to use this network. Courses are offered to high schools at attractive cost savings.

- The Teacher Training Institute, a result of the partnership between the South Carolina Department of Education and South Carolina Educational Television, provides professional development opportunities for teachers statewide on the use of technology resources in math and science.

Administrative Infrastructure

- IBM awarded the South Carolina Department of Education an $875,000 grant to develop a Data Warehouse to enable the department to form an electronic data collection and analysts system District data on school assessment and budgets can be extracted and loaded into the warehouse and extensive quieries can be

submitted. Citizens, educators, and policymakers will be able to access up-to-date information on which to base decisions about education.

- South Carolina has won national attention as the first state to implement a cost management system in all districts and schools. This system, In$ite, tracks how federal, state, and local education dollars are spent at the state; district, and local levels. All of In$ite's financial data is available to the general public on the South Carolina Department of Education's web site. By providing this tool for budget planning, managing funds, and communicating with the public about school finance, districts are better able to set priorities and align spending with those priorities.

- Leading by example, the South Carolina Department of Education developed and implemented an Internet-based online instructional materials ordering and inventory system. Teacher EIA grant applications and district Technology Literacy Challenge Fund sub-grant applications are also available online.

- Recognizing the need for advanced administrative software, four major computer software packages will be provided to school districts: a Windows-based school administration system to replace Osiris; a curriculum management system that correlates academic standards with what educators are teaching; a facilities management system; and a special education system for tracking IEPs and federal and state reporting.

- Traffic on the South Carolina Department of Education's Internet web site has increased from an average of 15,000 visits per month to more than 150,000. Information available for educators, parents, students, and community members has nearly tripled, and a complete redesign of the site makes it easier to use.

- An improved telephone system and a redesigned Internet site make obtaining teacher certification information easier for educators across the state. The Office of Teacher Education, Certification, and Evaluation plans to expand online services to include web-based access to all required application forms, regulations, requirements, and updates on changes.

Funding

- More than $84 million has been spent during the past three years to establish the statewide telecommunications infrastructure and to provide hardware, software, and professional development opportunities to schools and districts. State appropriations for educational technology funding has increased from $3,250,000 in 1995 to $33,520,000 in 1998.

- Apple license tags with the slogan, Public *Education: A Great Investment,* exemplify creative strategies to raise additional funds for educational technology. For $54 South Carolina citizens can purchase this special plate, with $34 of the fee going to the school district where the car is registered or to a specific school designated by the purchaser. The remaining $20 of the fee is distributed among school districts based on an equity formula.

- School districts have leveraged a variety of funding sources - including grants, business partnerships, bond referenda, and local funding sources - to support the objectives of district and school technology plans.

Arriving at one goal
is the starting point of another.
John Dewey

Introduction

"To thrive in today's world and tomorrow's workplace, America's students must learn how to learn, learn how to think, and have a solid understanding of how technology works and what it can do. American schools must, therefore, provide students with the opportunity to combine the best of traditional learning with the unprecedented opportunities technology offers."

CEO Forum, 1997

The nation is challenged to assure that all students are technologically literate and equipped with the communication, math, science, reading, social studies, visual and performing arts, foreign language and critical thinking skills essential for enhancing learning and improving productivity and performance.

Technology plays a central role in education improvement. To be able to prosper in a global economy and to be competitive in the 21st century, our students must have the skills and knowledge to access and evaluate information successfully from anywhere in the world at anytime.

One issue readily accepted today is the need to integrate technology in the learning process. Workers with computer skills significantly out-earn workers without these skills; therefore, the economic gap between the information-skilled and the unskilled continues to grow.

In a society permeated by rapidly changing and growing technology, we also have an obligation to promote lifelong learning and to provide our students with the resources that such an environment requires. High school graduates are no longer expected just to memorize facts. They need to know how to locate and use information effectively and efficiently in order to solve complex problems.

Providing equitable access to information regardless of where one lives is a primary concern to educators. South Carolina's unique public/private partnership provides access to the South Carolina Information Network (SCINET) for all K-12 public schools and libraries, affording new learning opportunities for our students and citizens.

Schools and districts, along with the State, have three major technology components with a focus on student learning:

Instructional
Technical
Administrative

- Instructional software applications and appropriate hardware that support teaching and learning in the classroom, media center, and lab.
- State telecommunications backbone for voice, video, and data.
- Ongoing support and maintenance for school and district networks.
- State funded software for administrative functions, curriculum management, special education, and facilities management.
- Library media center management software.
- Online textbook ordering.
- Data warehouse.
- Teacher certification.

All three components are essential in providing learners with optimum learning experiences. Furthermore, as educators we have an obligation to the children in our state that includes providing for students:

- Access to technology on a daily basis for research, problem solving, and projects.

- Increased electronic world wide information access via e-mail and the Internet.

- Sharing of instructional resources placed over the Wide Area Network and through Internet and intranet connections.

- Real-time classroom interactive sessions on the Internet with experts in the field.

- Use of an intranet for faculty and staff to electronically share lesson plans, common concerns, interests, and needs.

- Use of projectors, overhead panels, and laserdiscs interfaced to computers in the classroom to promote and enhance the learning experience.

- A safe environment for using Internet resources. Establishing an Acceptable Use Policy supports responsible use of the Internet.

"...we know from research that if technology is used properly by teachers, we will see gains in academic achievement for all students, from those in special-needs classes to those in our most advanced classes. South Carolina is ready to meet this challenge, to move forward, and to provide our children with the best possible education."

Barbara Stock Nielsen, Ed.D.
State Superintendent of Education

A growing body of research shows that when "properly used, technology can enhance the achievement of all students, increase families' involvement in their children's schooling, improve teachers' skills and knowledge, and improve school administration and management" (Valdez, Gilbert). Researchers at SRI International and the Education Development Corporation who studied schools where technology is used extensively, identified seven important factors that contribute to their success:

- Technology initiatives should start with instructional goals.
- Technology must be linked to curricular goals and frameworks.
- Technology and the assessment system must be compatible.
- Teachers and technology must work together.
- Teachers require ongoing pedagogical and technological support.
- Community and parent involvement enhances the likelihood of success.
- Business plays an important role in technology and school reform.

Information Resources Council
http://www.state.sc.us/irc

With a vision to coordinate and maximize South Carolina's information technology resources, the South Carolina Information Resources Council was created in 1996. One of the goals of the Council is to assure that information/telecommunications technology is a tool and NOT a barrier to the achievement of the vision and goals for South Carolina.